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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/649,773	08/28/2003	Kyung-yol Yon	1349.1233	5857
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EXAMINER

NGO, HOANG X

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/649,773	YON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Hoang Ngo	2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 February 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7-13 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 14-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 7-13 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al in view of Nitta et al.

Yamamoto et al disclose a wet type image forming apparatus 1 having a printer body 6 comprising a discharge duct 41 having an inlet portion e (Fig. 1) disposed adjacent to a fusing roller 7 and an outlet portion 19 disposed between the inlet portion and an outside of the printer body to discharge air from an inside of the printer body to the outside of the printer body (Fig. 1); a discharge fan 27 disposed in the discharge duct and between the inlet portion and the outlet portion to guide the air inside the

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printer body in a direction from inside of the printer body to the outside of the printer body along the discharge duct (see Fig. 1 for direction of air flow); and a filter 102 disposed in the discharge duct between the inlet portion and the outlet portion to filter and deodorize the air passing (Col. 11, line 44).

Yamamoto et al further disclose the inlet portion of the discharge duct is disposed to enclose a portion of the fusing roller unit (see Fig. 1, enclosed by elements 41, 21, and 18); the fusing roller unit comprising a fusing roller 7 a backup roller 8, the paper 30 passes through between the rollers and a portion of one of the rollers is disposed in an inside of the inlet portion (see Fig. 1); a common center line meets a line in the direction of the air in the discharge duct (see Fig. 1); the filter has the same area as the discharge duct in a direction from the inlet to the outlet portion (see Fig. 7); the filler further comprising a carbon filter having an absorbent material and may contain a non-thermal plasma system (Col. 11, line 44 thru Col. 12, line 39).

Yamamoto et al do not disclose that the filter 6 is in the form of a photo catalyst filter having a photo catalyst body coated with a photo catalyst and a plasma device disposed to generate a reaction from the photo catalyst.

Nitta et al disclose a filter is in the form of a photo catalyst filter 6 having a photo catalyst body coated with a photo catalyst and a plasma device 7 to generate excitation from the photo catalyst (see Para. 0024).

Nitta et al further disclose the photo catalyst comprising TiO<sub>2</sub> (Para. 0016), the photo catalyst body comprising a honey-comb matrix made of a ceramic (Para. 0016),

the photo catalyst filter comprising a carbon filter having an absorbent material and the filter is perforated (Para. 0015).

Therefore, it would have been obvious to one having ordinary skill in the art to provide the filter as taught by Nitta et al to the printing filter device of Yamamoto et al to improve air filtering effectiveness.

#### ***Allowable Subject Matter***

4. Claims 1-6 are allowed.
5. Claims 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

6. Applicant's arguments filed 02/08/2005 have been fully considered but they are not persuasive. The Applicant argues that Yamamoto reference does not teach the discharge passage and the discharge fan. The examiner disagrees and as pointed in the above rejection, Yamamoto reference clearly discloses, in Fig. 1, the discharge passage as being the element 41 and the discharge fan as being the element 27.

#### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

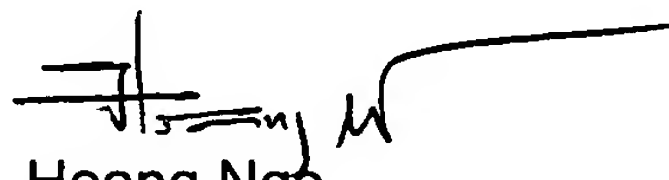
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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang Ngo whose telephone number is (571) 272-2138. The examiner can normally be reached on 6:00am - 2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Hoang Ngo  
Primary Examiner  
Art Unit 2852

Hn